UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,214	10/13/2005	Masanao Kamei	4710-0122PUS1	8978

2292 7590 08/14/2007

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
SOROUSH, ALI	

ART UNIT	PAPER NUMBER
1616	

NOTIFICATION DATE	DELIVERY MODE
08/14/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/553,214	KAMEI ET AL.	
	Examiner	Art Unit	
	Ali Soroush	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25,27 and 28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25, 27, and 28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 9, 11-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Tetsuo et al. (European Patent Application EP 1065234 A2, Published 03/01/2001).

Tetsuo et al. teaches, "Cosmetic material containing powders treated with silicones, with silicones being represented by the following formula (1):

$R^1_a R^2_b R^3_c SiO_{(4-a-b-c)/2}$ (1)

wherein the R^1 groups, which are the same or different, each represent an organic group selected from the class consisting of alkyl groups containing 1 to 30 carbon atoms, aryl groups, aralkyl groups, fluorinated alkyl groups and organic groups represented by the following formula (2); R^2 groups each represent a reactive substituent selected from the class consisting of a hydrogen atom, hydroxyl group and alkoxyl groups containing 1 to 6 carbons atoms, which is attached to a silicon atom in the siloxane chain directly or via a linkage group comprising at least one carbon, oxygen or silicon atom; R^3 groups each represent a silicone compound residue represented by the following formula (3); a is a number of from 1.0 to 2.5; b is a number of from 0.001 to 1.5; and c is a number of from 0.001 to 1.5

$-C_dH_{2d}-O-(C_2H_4O)_e (C_3H_6O)_f R^4$ (2)

$-C_xH_{2x}-(SiO)_y(R^1)(R^1)-SiR^1_3$ (3)

wherein R^4 is a hydrocarbon group containing 4 to 30 carbon atoms or an organic group represented by R^5-(CO)-; R^5 is a hydrocarbon group containing 1 to 30 carbon atoms; d is an integer of from 0 to 15, e is an integer of from 0 to 50, and f is an integer of from 0 to 50; and x is an integer of from 1 to 5, and y is an integer of from 0 to 500." (See abstract). The cosmetic material can come if any of the forms including liquid, emulsion, solid, paste, gel and spray forms. (See page 9, Lines 9-10). "When the present silicone compounds represented by formula (1) are used as a powder surface-treating agent, the weight average molecular weight suitable therefor, though it has no particular limits, is from 300 to 100, 000." (See page 4, Lines 30-31). In a specific example a compound organosiloxane is formed for use in a cosmetic composition that has an $R^{***} = C_3H_6O(C_3H_6O)_3C_{18}H_{35}$ (see example 4), $R^{**} = C_2H_4(CH_3)_2SiO(SiO)_7(CH_3)(CH_3)Si(CH_3)_3$, $R^* = C_2H_4Si(OEt)_3$ (See example 1). (See page 10, paragraph 0077 and page 11, formula 12). "A surface treated powder, having the surface treated by using silicones according" the description in the abstract. (See page 23, claim 2). " A cosmetic material in which powders are mixed, at least one of said powders being a surface-treated powder according to any of claims 2 to 7. (See page 23, claim 8). "A cosmetic according to claim 8, further containing uncutuous agents as a constituent." (See page 23, claim 9). "A cosmetic material according to claim 9, wherein at least a part of the uncutuous agents are fats and oils in a liquid state at room temperature." (See page 23, claim 10). "A cosmetic according to claims 9, 10, 11, wherein at least one of the uncutuous agents is an oil having fluorine-containing groups or amino groups." (See page 23, claim 12). Additional unctuous agents that can be used in the cosmetic

material includes cylcosiloxane solutions of silicone rubber. (See page 6, paragraph 39). "A cosmetic material according to any of claims 8 to 17, further containing water as a constituent." (See page 23, claim 18). " A cosmetic material according to any of claims 8 to 18, further containing as a constituent a compound having an alcoholic hydroxyl group in its molecular structure." (See page 23 and 24, claim 19). "A cosmetic material according to claim 19, wherein the compound having an alcoholic hydroxyl group in its molecular structure is a water-soluble polymer." (See page 24, claim 21). A cosmetic material according to any of claims 8 to 21, further containing cross-linked organopolysiloxanes as a constituent." (See page 24, claim 22). "A cosmetic material according to claim 22, wherein the cross-linked organopolysiloxanes are cross-linked organopolysiloxanes which cause swelling when they contain a silicone having low viscosities of from 0.65 to 10.0 mm^2/sec at 25°C in a quantity larger than their self weight." (See page 24, claim 23). "A cosmetic material according to claims 22 or 23, wherein the cross-linked organosiloxanes having cross-linked structure formed by the reaction between the hydrogen atoms bonded directly to silicon atoms and a cross-linking agent having at least two vinylic reactive moieties per molecule." (See page 24, claim 24). " A cosmetic material according to any of claims 8 to 25, further containing silicone resin as a constituent." (See page 24, claim 26) " A cosmetic according to claim 26, wherein the silicone resin is a silicone compound having a network structure." (See page 24, claim 29). "A cosmetic material according claim 29, wherein silicone compound having a network structure is netted silicone compound containing at least one moiety selected from the group consisting of pyrrolidone, long-chain alkyl,

polyoxyalkylene, fluroalkyl and amino moieties." (See page 24, claim 30). "A cosmetic according to claim 26, wherein the silicone resin is an acrylsilicone resin." (See page 24, claim 27). "A cosmetic according to claim 27, wherein the acrylsilicone resin is an acrysilicone containing at least one moiety selected from the group consisting of pyrrolidone, long-chain alkyl, polyoxyalkylene, fluoroalkyl and amino moieties." (See page 24, claims 28). "A cosmetic material according to any of claims 22 to 24, wherein the cross-linked organopolysiloxanes are organopolysiloxanes having their cross-links at least one kind of moiety selected from the family consisting of polyoxyalkylene, alkyl, alkyenyl, aryl anf fluoroakyl moieties." (See page 24, claim 25)." A cosmetic material according to claims 8 to 12, further containing a surfactant constituent." (See page 23, claim 13). "A cosmetic according to claim 13, wherein the surfactant is modified silicone having polyoxyalkylene chains." (See page 23, claim 14). A cosmetic material according to claims 8 to 15, further containing another powder, a coloring material or a mixture thereof." (See page 23, claim 16). "A cosmetic material according to claim 16, wherein at least a part of the powder, the coloring material or the mixture thereof is a silicone resin powder, a powder having a silicone elastomer as its skeleton, an organic powder containing constitutional repeating units represented by $-[O\text{-}Si]_n-$ or a mixture of two or more thereof." (See page 23, claim 17). In example 12 a liquid emulsion composition is described comprising diemthylpolysiloxane, methylphenylpolysiloxane, organopolysiloxane modified with polyoxyalkylene and alky groups, purified water, etc. (See page 17, paragraph 0117). In example 16 a cream composition is describe comprising decamethylcyclopentasiloxane (cyclic siloxane), dimethylpolysiloxane,

polyether-modified silicone, purified water, etc. (See page 20, paragraph 0129). "The term 'cosmetic material' as used herein are intended to include skin care ... and hairdressing products, such as shampoo, rinse and treatment." (See page 9, Lines 6-9). It is the examiner position that water is a component that is "suitable for application to hair" and therefore meets the limitation of "at least one additional ingredient suitable for application to hair". Further, the recitation of "hair treatment compoisition" and "hair treatment" is an intended use of the composition and therefore not given patentable weight. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. For the foregoing reasons the instant composition is anticipated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue; and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 5, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tetsuo et al. (European Patent Application EP 1065234 A2, Published 03/01/2001).

Applicant Claims

Applicant claims a composition comprising an organopolysiloxane and an amino-modified silicones. Applicant further claims a method of conditioning hair by applying the composition to the hair.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

The teachings of Tetsuo et al. is discussed above.

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

Tetsuo et al. does not exemplify a composition comprising an organopolysiloxane and further an amino-modified organopolysiloxane. Further, Tetsuo does not exemplify a hair treatment applications.

Tetsuo et al. does teach the addition of unctuous agent which can be cyclic siloxanes and amino-modified among other compounds. Teaching that these are obvious variants. Tetsuo et al. also teaches that such compositions can in addition to having use as skin cosmetics can also be used in hairdressing applications.

Finding of Prima Facie Obviousness Rational and Motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the instant application to use an amino-modified polysiloxane in place of a cyclic

polysiloxane (i.e. decamethylcyclopentasiloxane). One would be motivated to do this as the two compounds have been taught to be functional equivalents and can be used interchangeably in the composition. It would have also been obvious to one of ordinary skill in the art at the time of the instant invention to use the composition taught by Tetsuo et al. in hairdressing applications such as hair treatment. One would have been motivated to do so because if one wanted a composition to be applied to the hair which has excellent storage stability in an emulsified condition (See page 2, paragraph 0009) one would have used the composition taught by Tetsuo et al. For the foregoing reasons the instant invention would have been obvious to one of ordinary skill in the art at the time of the instant invention.

2. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tetsuo et al. (European Patent Application EP 1065234 A2, Published 03/01/2001) further in view of Nishizawa et al. (US Patent Application 2006/0123564 A1, Published 06/15/2006, Filed 11/27/2003).

Examiner has assumed the effective filing date of the Nishazawa et al. document is 11/28/2002. This is the earliest priority date claimed by Nishazawa et al. that has support for the teachings below.

Applicant Claims

Applicant claims a composition comprising an organopolysiloxane and an amino-modified silicones.

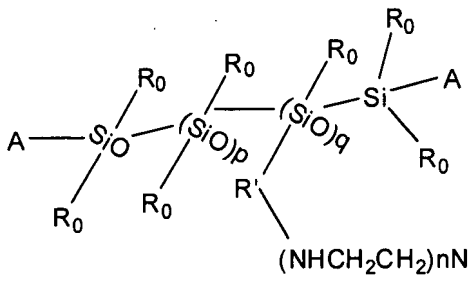
Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

The teachings of Tetsuo et al. is discussed above.

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

Tetsuo et al. lacks a teaching of an amino-modified silicone selected from amino acid grafted to a silicone backbone, silicones having an amino group bonded to either one end of a silicone backbone, silicones having an amino group bonded to both ends of a silicone backbone, silicones having an amino group bonded to both ends of a silicone backbone and amino acid grafted to a silicone backbone, silicones having a silicone chain and an amino group both grafted to a silicone backbone. This deficiency is cured by the teachings of Nishizawa et al.

Nishizawa et al. teaches, a "composition for hair bleaching or hair dyeing" (See title. Provided is a hair bleach or dye composition containing an amino-modified silicone, a highly polymerized silicone having a number-average degree of polymerization of 1000 or greater, a cationic polymer and an oxidizing agent." (See abstract). Amino modified silicones taught by Nishazawa et al. are represented by the formula:



wherein R_0 represents a hydroxyl group, a hydrogen atom or R , R represents a substituted or unsubstitued monovalent hydrocarbon group having from 1 to 20 carbon atoms, A represents R, a group $-R'-(NHCH_2CH_2)_nNH_2$, a group OR or hydroxyl group, R' represents a divalent hydrocarbon group from 1 to 8 carbon atoms, n stands for 0 to

3, and p and q are numbers, the sum of which is, in average, 10 or greater but less than 1000, preferably 30 or greater but less than 1000, more preferably 40 or greater but less than 800. (See paragraph 0009). A specific commercially available example given is KF8003 made by GE Toshiba Silicones. (See paragraph 0010). "Hair damage is accumulated by the repetition of bleaching or dyeing and is particularly eminent in the tip of the hair ..." (See paragraph 0003). "In order to deal with such a problem, an additive having a conditioning action is added. For example, there are reports on the addition of a silicone derivative such as amino-modified silicone oil in order to dye hair with a deep color tone ... addition of an amino-containing polyorganosiloxane to give the hair a flexible touch and improve the hair setting property ... and addition of a highly polymerized silicone or derivative thereof in order to prevent the hair damage and improve hair feel of the hair ..." (See paragraph 0004).

Finding of Prima Facie Obviousness Rational and Motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Tetsuo et al. and Nishizawa et al. One would have been motivated to do this in order to add hair dye applicability to the hairdressing composition taught by Tetsuo. Therefore, if one wanted a hair dye composition comprising an organopolysiloxane one would expect that the addition of an amino-modified silicone as taught by Nishazawa et al. would result in such a composition because Tetsuo et al. teaches that the compositions taught can be used in treatment of hair and therefore it would be obvious that the addition of other components would result in specific treatments of hair for instance hair dyeing. For the

foregoing reasons the instant composition would have been obvious to one of ordinary skill in the art at the time of the instant invention.

3. Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tetsuo et al. (European Patent Application EP 1065234 A2, Published 03/01/2001) further in view of Nishizawa et al. (US Patent Application 2006/0123564 A1, Published 06/15/2006, Filed 11/27/2003) further in view of Nakazatoa et al. (US Patent 6290942 B1, Published 09/18/2001).

Applicant Claims

Applicant claims a composition comprising an organopolysiloxane, an amino-modified silicones, and carboxyl-modified silicone.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

The teachings of Tetsuo et al. and Nishizawa et al are discussed above.

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

The combined teachings of Tetsuo et al. and Nashizawa et al lack a teaching of a carboxyl-modified silicone. This deficiency is cured by the teachings of Nakazato et al.

Nakazato et al. teaches a composition for application to hair comprising carboxyl-bearing silicone derivatives and can further comprise other silicone derivatives including fluorine modified silicones, polyether modified silicones, etc. because the functions of silicones can be enhanced in a synergistic manner. (See column 9, Lines 4-13). "The carboxyl-bearing emulsion of the invention, when blended with an ordinary amount as a silicone component in hair preparations, imparts less smoothness, suppleness and

antistatic effect, achieves soft, silky, free flowing, nonsticking, pleasant finish. In addition, the silicone is resistant to overnight kinking and curling and able to hold style. (See column 9, Lines 45-53).

Finding of Prima Facie Obviousness Rational and Motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art to combine the teachings of Tetsuo et al. and Nishazawa et al. with Nakazato et al. One would have been motivated to do this because the additive effect of the derivatized silicones would be beneficial in that it would enhance the synergyism of the silicones. Further, one would combine the teachings if one wanted to formulate a hair treatment composition that would dye the hair and further impart smoothness, suppleness, and the ability to hold the desired style overnight. For the foregoing reasons the instant invention would have been obvious to one of ordinary skill in the art at the time of the instant invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Soroush whose telephone number is (571) 272-9925. The examiner can normally be reached on Monday through Thursday 8:30am to 5:00pm E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number For the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ali Soroush
Patent Examiner
Art Unit: 1616

Primary Examiner

Johann Richter
Supervisory Patent Examiner
Technology Center 1600